BID Africa 1 – Small Grant Template
Mid-term narrative report

Instructions

- Fill the template below with relevant information. If no result has been achieved on a specific point, please indicate it as “no result achieved yet”
- Use the information included in your project Full proposal (reproduced in annex III.a. of your BID contract) as a baseline from which to complete this template
- The information provided below must correspond to the financial information that appears in the financial report
- Sources of verification are for example links to relevant digital documents, news/newsletters, brochures, copies of agreements with data holding institutions, workshop related documents, pictures, etc.
- This report must first be sent as a Word document to BID@GBIF.org and be pre-approved by GBIFS
- Once this report is pre-approved in writing by GBIFS, it must be signed by the BID project coordinator and sent by post to:

  The Global Biodiversity Information Facility Secretariat (GBIFS)

  Universitetsparken 15

  DK-2100 Copenhagen Ø

  Denmark

Template

1. Table of Contents

This programme is funded by the European Union

2. Project Description

2.1. Principal investigator and grant coordinator: Institution/network/agency name:
Fulbright Scholar Program, Maasai Mara University

2.2. Principal investigator name and role:
Adam W. Ferguson, Postdoctoral Fellow

2.3. BID proposal identifier:
BID-AF2015-0124-SMA

2.4. Project title:
Kenya's other carnivores: Harnessing biodiversity data for effective development of national conservation strategies

2.5. Start date and end date of the reporting period:
1 August 2016 – 19 January 2017

2.6. Country(ies) in which the activities take place:
Kenya

3. Overview of results

3.1. Executive summary

Give a short summary of the activities implemented and the outcomes of the project for the reporting period (no more than ½ page).

Despite getting off to a bit of a slow start, we have made substantial progress towards achieving our ultimate goal of using biodiversity data to develop Kenya's first, national conservation strategy for 31 species of small, mammalian carnivores. The first of two workshops, *Introduction to Biodiversity Informatics and Georeferencing*, was recently completed at Mpala Research Centre (MRC) with student participants from three Kenyan universities, the National Museums of Kenya, and MRC present. Students were introduced to the concept of the project, trained in digitization, mobilization, and georeferencing, and then assigned two species of small carnivores to make the focus of their post-workshop activities. Working in coordination with myself, these students will be completing weekly tasks involving digitization, georeferencing, and locating existing records for their respective species until the start of the second workshop. The students were eager to learn and seemed to grasp both the scope of and tools needed to complete this project. I am currently in discussions with the co-instructor for Workshop 2, *Application of Biodiversity Data for Conservation & Management*, which is scheduled to be held in late March 2017. A large number of records from NMK have already been digitized and I am meeting with the NMK students next week to digitally photograph all remaining specimen tags for the other students to begin digitizing. We are on track to have all data digitized and entered into the master database before the start of the second workshop in late March and thus will have data available for uploading into the GBIF portal by that time as well.

3.2. Progress against expected milestones:

Expected milestones/activities	Completed? Yes/No	Explanatory notes	Sources of verification
Completed capacity self-assessment questionnaire for data holding institutions (http://www.gbif.org/resource/82785)	Yes	NA	Email from mraymond@gbif.org On 22 Sep 2016
The instituton that will publish your data is registered with GBIF.org For registered data publishers see: http://www.gbif.org/publisher/search	Yes	National Museums of Kenya	GBIF.org
The data users identified in the full proposal have documented their intended use of the mobilized data and provided early feedback	Yes	Kenya Wildlife Service	Email exchanges and meetings. Contact mumbi@kws.gov for confirmation

3.3. Datasets published on GBIF.org

If the dataset is not yet published, please indicate the name of the institution that is expected to host the data when published in the column "DOI or URL/Planned hosting institution". Add as many rows as needed.

Dataset title	Publishing institution	DOI or URL/Planned hosting institution	Date/expected date of publication	Explanatory notes
No result achieved yet	National Museums of Kenya	National Museums of Kenya	June 2017	We are still working with NMK to get all materials digitized and georeferenced but have run into a few political issues that have delayed this. I am meeting with officials there this week to try and smooth over the political issues.
No result achieved yet	Kenya Wildlife Service	National Museums of Kenya	June 2017	Despite reaching out to KWS several times, information regarding their records have not been forthcoming and according to their GIS person

				there might not be a lot of records of small carnivores in their database. We have had difficulty in getting KWS to engage in this project altogether, i.e. not responding to emails, not attending workshops, not providing records or students to attend workshops, etc.
No result achieved yet	Mpala Research Centre	National Museums of Kenya	June 2017	There are fewer small carnivores records than originally envisioned but we are working to sort those out and digitize other mammalian specimens at MRC and transfer them to NMK for accessioning.

3.4. Examples of use of biodiversity data available through GBIF

Use the table to document use or planned use of data available through GBIF as part of your project. Please provide the DOI for datasets published on GBIF or data downloaded from GBIF in the "Dataset" column. Briefly describe how the data have been used or are planned to be used in the "Data use" column (ca. 50 words). Provide the date or approximate time frame in months for the use or planned use in the "Date/time frame" column. Please provide links to any documents or webpages documenting the use in the "Sources of verification" column. Add as many rows as needed.

Dataset	Data user	Data use	Date/time frame	Sources of verification	Notes
African Small Carnivores N = 31 spp	Workshop Participants	Practice accessing data from digital repositories	Jan – Mar	http://www.gbif.org/event/83139	Data will also be used for mapping distributions
Kenya Small Carnivores n = 31 spp	Workshop Participants KWS NMK	Digital collection of records from Kenya	Jan – Mar	http://www.gbif.org/event/83139	These records will be used to document where specimens collected in Kenya are located
Georeferenced and Digitized Records of Kenya small carnivores	KWS	Use to build distribution maps, predict distributions, and prioritize conservation actions	Mar- Jun	In progress	This is the ultimate goal of this grant, to use these accumulated records to develop and publish a national conservation strategy for these 31 species.

3.5. Events organized as part of the project

List all the events that have been organized as part of your project. Please provide links to any documents or webpages documenting the use in the "Sources of verification" column. Add as many rows as needed.

Full title	Organizing institution	Dates	Number of participants	Sources of verification
Introduction to Biodiversity Informatics and Georeferencing Workshop	Mpala Research Centre	14 – 18 January 2017	20	http://www.gbif.org/event/83139
Ecological Niche Modeling and Conservation Biogeography	Mpala Research Centre	21 – 26 March 2017	22	See attached syllabus

4. Implementation of BID project activities

Refer to section 2.2 "Deliverables, activities and reporting criteria" in your BID full proposal. Provide updates on each of the activities using the reporting criteria and other sources of verification as appropriate.
Sources of verification are for example links to relevant digital document, news, newsletter, brochures, copies of agreements with data holding institutions, workshop related documents, pictures, etc.

4.1. Goal 1: Increase available biodiversity data, within and beyond the grant period

Activity 1 name: Database Scheme, Reporting Scheme, and Database Creation

Please use same activity name as the one given in section 2.2 "Deliverables, activities and reporting criteria" in your BID full proposal.

Description of any implementation during the reporting period

Meeting to discuss a database scheme with all project partners was not feasible given the extra costs of hosting such a meeting and the expected per diem rates for government employees. In addition, time spent in meetings to develop the reporting scheme and receive partner approval would have been nearly impossible considering I could not get partners to respond to critical issues such as workshop participant selection and scheduling. Together with the students during Workshop I, we discussed and formualted a database in Excel spreadsheet following Darwin Core principles and incoporating the fields we felt were most relevanat to our project goals. This was more in line with the students skill sets as they are more comfortable using Excel compared to Access or other relational databases.

Sources of verification

See attached spreadsheet (SmallCarnivoreDatabaseTemplate.xlsx)

Activity 2 name: Workshop I

Description of any implementation during the reporting period

Workshop I: Introduction to Biodiversity Informatics and Georeferencing was successfully implemented at Mpala Research Centre between 14 – 18 January 2017. There were 20 participants, 16 students, and 4 professionals, including myself. The 14 students selected as project participants were assigned two species of small carnivores each that they then are

responsible for taking through the whole process of obtaining data, digitizing, georeferencing, and ultimately modeling distributions for. These students will thus work with data they collected, vetted, and georeferenced for the second workshop to be held in March 2017. We decided to hold off on awarding the certificate for the first workshop as suggested by our professors at Karatina University in the idea that we provide these at the end of the second workshop/completion of the project so as to encourage continued participation by the students over the coming months.

Sources of verification

http://www.gbif.org/event/83139

See attached Syllabus (GBIF_BID_WS1_Schedule_FINAL.pdf)

Activity 3 name: Workshop II

Workshop II: Ecological Niche Modeling and Conservation Biogeography is scheduled to occur between 21-26 March 2017 at Mpala Research Centre in Laikipia County, Kenya. Dr. Andrés Lira Noriega arrived in Kenya on March 15 and will serve as the primary instructor for this workshop given his expertise in the major topics. The 14 students will arrive with digitized and georeferenced records for their two assigned (selected) species which will be used to generate predictive distribution maps and spatial conservation prioritization schemes.

Sources of verification

See attached syllabus (SyllabusKenyaWorkshopII_FINAL.pdf)

Activity 4 name: NMK Digitization

Description of any implementation during the reporting period

336 records of small carnivores from the Mammalogy section at the National Museums of Kenya have been digitized into excel. The remaining materials, including those housed in osteology, have had all tags/specimens digitally photographed by the three individuals selected by NMK for this project. These images are being dispersed to each of the 14 students by species and will be digitized and georeferenced by the end of March 2017.

Sources of verification

See attached spreadsheet provided by NMK database manager (NMK Small mammals data.xlsx)

Activity 5 name: MRC Digitization

Description of any implementation during the reporting period

Unfortunately it turned out that most of the MRC specimens were of species other than small carnivores (e.g. mostly large ungulates) and thus provided few records for our project. However, these specimens will be digitized and Georeferenced during Workshop II and transported to NMK or TBI for final deposition in a registered institution.

Sources of verification

None

Activity 6 name: BMNH Digitization

Description of any implementation during the reporting period

The BMNH declined to be participants in this grant based on legal advice from their superiors. In addition, the trip by AWF to London to digitize material was not possible due to financial constraints. However, a subset of species from the BMNH (e.g., *Bdeogale*, *Herpestes*) were included and digitized by students for georeferencing.

Sources of verification

None

Activity 7 name: Other Digitization

Description of any implementation during the reporting period

Other records that have yet to be digitized include a large dataset on small carnivores from Laikipia County from a 6 month long camera trapping project. These will be digitized and available as records by June 2017.

Sources of verification

https://emammal.si.edu/kenya-dung-dependency-project

Activity 8 name: KWS Records

Description of any implementation during the reporting period

KWS has not provided any records or indications of the kinds of records they have and how we might go about accessing them. They failed to provide the 4 students from their orgainzatiton which were to participate in the workshop and facilitate access to these data. I reached out to their main GIS person on my own and received a response that indicated there might not be that many records to begin with.

Sources of verification

See Email (KWS_EmailRecords.docx)

Activity 9 name: On-line Records

Description of any implementation during the reporting period

Students downloaded and obtained all records of their respective species form GBIF, VertNet, iNaturalist, and four museum-specific databases (i.e., NMNH, AMNH, FMNH, and Arctos). These records were collected as part of their 'Digital Repository Search Activity' and forms the foundation of much of their species occurrence records.

Sources of verification

GBIF DOIs (GBIF_SpeciesDOIs.docx) and Digitization Activity Worksheet (Activity_DigitalRepositoryRecords.pdf)

Activity 10 name: Literature records

Description of any implementation during the reporting period

Students also obtained records form the literature using Google Scholar and Biodiversity Heritage Library via the 'Literature Records Search Activity'

Sources of verification

Literature Activity Worksheet (Activity_LiteratureRecords.pdf)

Activity 11 name: NMK Georeferencing

Description of any implementation during the reporting period

Students are actively georeferencing NMK specimens and should have all materials completed by the end of March 2017.

Sources of verification

None

Activity 12 name: MRC Georeferencing

Description of any implementation during the reporting period

What few records are available have limited to no data, but students will be working as a group to sort, digitize, and georeference this material during the Workshop II.

Sources of verification

None

Activity 13 name: BMNH Georeferencing

Description of any implementation during the reporting period\

See above comments regarding access to BMNH specimens.

Sources of verification

None

Activity 14 name: Other Georeferencing

Description of any implementation during the reporting period

Students have spent the last week georeferencing their digitally accessed and literature-based records for use in Workshop II.

Sources of verification

Excel spreadsheets as of 21 March 2017

Activity 15 name: Literature Georeferencing

Description of any implementation during the reporting period

Students have spent the last week georeferencing their digitally accessed and literature-based records for use in Workshop II.

Sources of verification

Excel spreadsheets as of 21 March 2017

4.2. Goal 2: Apply biodiversity data in response to conservation priorities

Activity 1 name: Distribution Maps for each Kenyan Species

Description of any implementation during the reporting period

Students will be using QGIS and Maxent to develop record-based and predictive distribtution maps for all 31 species respectively. This will occur during Workshop II.

Sources of verification

Maps as of 26 March 2017.

Activity 2 name: Protected area records

Description of any implementation during the reporting period

Students will use intercept spatial queries to determine how many records of each of their species occur in Kenya's protected areas. This will be used to provide a list of verified records of occurrence for all 31 species for each protected area, with guidelines on which species could/should occur in the respective protected area based on predictive distribution maps.

Sources of verification

Maps and PA lists by 26 March 2017.

Activity 3 name: Conservation prioritization

Description of any implementation during the reporting period

Practice runs using Zonation have been performed and will be finalized during Workshop II.

Sources of verification

Output from Workshop II

Activity 4 name: Gap analysis

Description of any implementation during the reporting period

No result achieved yet- will be addressed during Workshop II (March 2017)

Sources of verification

Output from Workshop II

Activity 5 name: Small Carnivore Conservation Strategy

Description of any implementation during the reporting period

This one will prove challenging as KWS does not appear to be too engaged in this whole process. I envision writing a majority of this draft using results from Workshop II together with revised analyses conducted after the workshop. The draft should be provided to KWS for comment by 30 June 2017.

Sources of verification

None

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5. Updated calendar for the BID project implementation and evaluation period

The calendar should be completed in the same way as in the Full Project Proposal, but should include any expected changes. Provide reasons for any expected changes in section 5.1 'Explanatory Notes'.

Implementation period (maximum 14 months, starting 1 June 2016 at the earliest)																									
Implementation period start date and end date (dd/mm/yy)	06/07/2016 – 06/07/2017																								
Activity	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	18	19	20	21	22	23	24	Notes
Mid-term evaluation and reporting							X																		
Database scheme	X																								
Reporting scheme	X																								
Database creation	X																								
Workshop 1							X																		Delayed from 1st to 6th month
Workshop 2									X																21-26 March 2017 @ MRC
NMK Digitization								X	X																Nearly complete
MRC Digitization								X	X																Very few records
BMNH Digitization								X	X																BMNH only allowed access to partial records
Other Digitization								X	X																
KWS Records																									No real hope of getting records from KWS
On-line Records								X	X																
Literature Records								X	X																

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NMK Georeferencing							X	X															
MRC Georeferencing							X	X															See above comment
BMNH Georeferencing							X	X															See above comment
Other Georeferencing							X	X															
Literature Georeferencing							X	X															
Distribution Maps								X	X														
Protected Area Records								X	X														
Conservation Prioritization								X	X														
Gap Analysis								X	X														
Conservation Strategy										X	X												Draft of strategy by 30 June 2017

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Evaluation period (maximum 6 months, ending 31 December 2017 at the latest)							
Evaluation period start date and end date (dd/mm/yy)	01/08/17 – 31/10/17						
Activity	Aug	Sep	Oct	Nov	Dec	6	Notes
Final financial and narrative reporting	X	X					
Verification of functionality of reporting system	X						
Publication of Conservation Strategy			X				Timed to be released with the annual KWS Carnivore Conservation Conference held in October
Peer-reviewed Publication of Results			X				

5.1. Explanatory notes:

After completion of Workshop 1 we decided that assigning each individual two species rather than breaking the data up into organizational groupings was a more effective way for both teaching and mobilizing these data. Thus, all 14 students will be collecting, digitizing, and georeferencing data for their respective species between now and the start of Workshop 2 (20 March 2017). Then, each stuent will model using one of their two species during Workshop 2, leaving the second species for modeling on their own. This strategy means we are collecting and digitizing the data across a single chunk of time rather than splitting them up by organizational datasets, as originally outlined in the full proposal.

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6. Beneficiaries/affiliated entities and other cooperation

6.1. Relationship with project partners

Please describe the relationship between your project coordinating team/institution and your project partners, and with any other organisations involved in implementing your BID project.

Our project unites NGOs, government institutions, and universities to work towards developing a conservation strategy for Kenya's small and often neglected carnivores. The initial stages of the project have seen strong collaborations between Mpala Research Centre and the National Museums of Kenya and Karatina University. Kenya Wildlife Service's contributions and partnership will become more prevalent as we move into using the digitized data to develop a conservation plan. One of the most important outcomes of this project will be exposing students to one of the organizational chains in conservation, notably progression from research (MRC) to data repositories (NMK) and finally government policy (KWS). We are also hoping to work more closely with Wycliffe Mutero, head of KWS GIS program, to ensure we obtain the maximum number of small carnivore records for use in our predictive modelling/mapping of ountry-wide distributions.

6.2. Links to other projects and actions

Where applicable, outline any links and synergies you have developed with other actions, e.g. GBIF nodes, other BID funded projects, etc. If your organization has received previous grants in view of strengthening the same target group, how far has your BID project been able to build upon/complement the previous project(s) ?

No result achieved yet.

7. Visibility

Please refer to the BID guidelines

7.1. Visibility of the BID project

How is the visibility of your BID project being ensured?

Short summary

We are using social media (Twitter, Facebook) to deliver the message about our project as well as having the workshop at an institution currently hosting students and faculty from more than 5 Universities and 3 countries. We will work to raise awareness of the projects goals and objectives as we move from the mobilization to implementation stage. We are also planning on including a note about the recent workshop in Mpala Memos, MRC's newsletter that is sent out to research scientists across the globe.

Sources of verification

7.2. Visibility of the EU contribution

How is the visibility of the EU contribution being ensured within your project implementation?

Short summary

Inclusion of the EU flag and a statement describing how the EU funded this work has been included in all documents and presentations put together thus far.